REMARKS

The Examiner objected to claims 7 and 8, citing a perceived indefiniteness in these claims. Claim 7 has been amended to address this instance of perceived indefiniteness. Claim 8 depends from claim 7, and so the perceived indefiniteness of claim 8 is believed to have been addressed by the amendment to claim 7. Additionally, a similar indefiniteness infected claim 10. Claim 10 has been amended to overcome any indefiniteness in it as well.

The Examiner rejected claims 22, 23, 3-7 and 10-19 under 35 U. S. C. § 102. The Examiner relied upon Matsushita JP07-60185 (hereinafter Matsushita) to support this rejection. Claims 22 and 23, the independent claims in this application have been amended by this amendment.

Specifically, claim 22, as amended, and Matsushita have the following differences in structure. In Matsushita, the detecting surface of the comparative electrode 3 is not disposed opposing the detection subject that is approaching. On the other hand, in the invention according to amended claim 22, both detecting surfaces of the first detection electrode and the second detection electrode are disposed opposing the detection subject that is approaching. Namely, in the invention according to amended claim 22, it is intended for the detection subject to approach the detecting surfaces of both electrodes. As explained in the English language translation of the specification at page 12, line 22-page 13 line 24, the following effect is obtained:

> The capacitance between the two conductors increases in inverse proportion to their distance, but the increase curve is logarithmical and suddenly rises from where there is less distance. Where the detection subject 20 is separated to an extent from the two detection electrodes 11 and 12 by the distances ra and rb, the capacitances formed (Ca ≈Cb) by the two detection electrodes 11 and 12 do not increase that much and the change resulting from the distances ra and rb is slow, but when the distances ra and rb become equal to or less than a certain extent (rb/ra > 1), the capacitances sharply increase. This sharp increase arises first in the detection electrode 11 that is closer to the detection subject 20. Thus, the difference (Ca - Cb) between the two capacitances (capacitance to grounds) Ca and Cb sharply increases. Thus, by measuring the two capacitances Ca and Cb and calculating the difference output Vo, the level state of the difference output Vo greatly changes (sharply increases) when the detection subject 20 has come into proximity to a certain extent to the proximity sensor.
>
> In this manner, when the detection subject 20 approaches the proximity sensor, the level state of the difference output Vo reacts as if there were a set distance threshold and clearly

> indicates whether or not the detection subject 20 is proximate. Thus, the range of proximity detection can be formed in a spatially open region, the affects (sic -- effects) resulting from the peripheral object 21 outside of the detection target can be avoided, and proximity detection with few malfunctions becomes possible. The distance threshold at which the difference output Vo begins to react greatly can be optionally set by the range difference h of the two detection electrodes 11 and 12 with respect to the detection direction Y.

On the other hand, in Matsushita, it is not intended for the detection subject to approach the detecting surface of the comparative electrode. Therefore such an effect is not obtained in Matsushita.

As previously pointed out, in Matsushita, it is disclosed that the detection electrode 1 is shielded. However, it is not disclosed that the comparative electrode 3 is shielded. On the other hand, in the invention according to claim 23, as amended, it is now recited that both the first detection electrode and the second detection electrode are shielded.

The Examiner has argued that, in Matsushita, the detection electrode 1 and the comparative electrode 3 are lined up very close together, so that when detection electrode 1 is shielded, then as a result the comparative electrode 3 will also broadly be shielded.

However, claim 23 has now been amended to recite that "the shield electrode is formed in a rail shape having a substantially U-shaped cross section, with the first detection electrode and the second detection electrode being housed inside the U-shaped groove" in claim 23 after the amendment, there is no disclosure or suggestion of this in Matsushita. In Matsushita, even if the comparative electrode 3 is shielded due to the detection electrode 1 and the comparative electrode 2 being lined up very close together, the structure that the first detection electrode and the second detection electrode are housed in the U-shaped groove is not disclosed in Matsushita. Nor is there any description suggesting the above structure in Matsushita. Applicant notes that the structure in which the first detection electrode and the second detection electrode are housed in the U-shaped groove is disclosed in claim 7. Although the Examiner rejected claim 7 based on Fig. 5(b) in Matsushita, this figure only shows the detection electrode 1. Thus, Applicant submits that claim 23 as amended, patentably distinguishes over Matsushita.

Of the detection electrode 1 and the comparative electrode 3, if only the detection electrode 1 is shielded, when a subject other than the detection subject approaches the comparative electrode 3, the proximity of such a subject affects the difference between capacitance to ground formed by the detection electrode 1 and the capacitance to ground

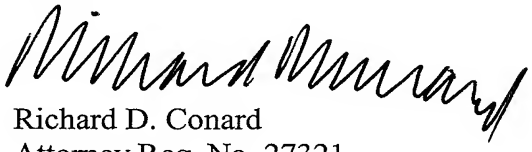
formed by the comparative electrode 3, and detection of proximity of the detection subject cannot be appropriately performed. In the invention of this application, both of the detection electrode 1 and the comparative electrode 3 are shielded, so that even if an object other than the detection subject approaches either the detection electrode 1 or the comparative electrode 3, the proximity of such an object does not influence the difference, and detection of proximity of the detection subject can be appropriately performed. Further, the shield electrode is formed in a rail shape having a substantially U-shaped cross section, with the first detection electrode and the second detection electrode being housed inside the U-shaped groove, so that objects floating in the air around the first detection electrode (raindrops, fog, or the like) and objects floating in the air around the second detection electrode are substantially the same, and detection malfunctions due to such floating objects can be avoided.

As claims 22 and 23, as amended, are now believed to distinguish patentably from Matsushita, Applicant submits that so also do claims 3-7 and 10-19 which depend directly or indirectly from one or the other of amended claims 22 and 23. Accordingly, Applicant submits that his claims 3-20, 22 and 23, as amended herein, are in condition for further favorable consideration, culminating in allowance. Such action is respectfully requested.

The Examiner rejected claim 8 under 35 U. S. C. § 103. The Examiner relied upon the combination of Matsushita and Melnick U. S. Patent 3,311,696 (hereinafter Melnick) to support this rejection. Claim 8 depends indirectly from claim 22. As noted above, claim 22 has been amended to distinguish patentably over Matsushita. Melnick adds nothing to the teachings of Matsushita which would cure the above-noted deficiency of Matsushita vis-à-vis amended claim 22. Claim 8 is entitled to further favorable consideration, culminating in allowance, at least on this basis. Such action is respectfully requested.

The Commissioner is hereby authorized to charge any fees which are required to constitute this a timely response to the February 14, 2008 official action to Applicant's undersigned counsel's deposit account 10-0435 with reference to file 40433-78389.

Respectfully submitted,



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